

**ABSTRACT**

The present invention provides a system and methods for centrally storing, managing, processing, and visually displaying real-time enterprise manufacturing management and control information across the many cooperating departments of a manufacturing environment. In an illustrative implementation, the present invention comprises an exemplary manufacturing data management and control computing application deployed across the various departments of a manufacturing enterprise through a computing environment having data communications capabilities. The manufacturing data management and control computing application comprises a display area and processing area. The display area comprises a graphical user interface capable of displaying various types of manufacturing and manufacturing related data to participating users. The exemplary manufacturing data management and control computing application processing area comprises a data management and control engine. The data management and control engine operates on a set of predefined data management and control rules to process data for display, communication, and storage.